

REMARKS

Applicant respectfully requests further examination and reconsideration in view of the above amendments and the comments set forth fully below. Claims 1-46 were pending. Within the Office Action, claims 1, 2, 8-11, 22, 40-42 and 44-46 have been rejected and claims 3-7, 12-21, 23-39 and 43 have been objected to. By the above amendment, claims 1, 10, 11, 23, 25, 40-42 and 44-46 have been amended and claim 22 has been canceled. Claims 1-21 and 23-46 are now pending.

Objections To The Claims

Within the Office Action it is stated that claim 25 is objected to because the claim should end in a single period. By the above amendment, claim 25 has been amended and now ends in a single period.

Rejections Under 35 U.S.C. § 112

Within the Office Action, claims 11, 40-42 and 44-46 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. By the above amendments, claims 11, 40-42 and 44-46 have been amended as requested by the Examiner. For at least these reasons, claims 11, 40-42 and 44-46 are allowable as they are definite and do particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Rejections Under 35 U.S.C. § 102(b)

Claims 1, 2, 8 and 9 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,179,438 to Morimoto (hereinafter Morimoto). In particular, it is asserted within the office action that claims 1, 2, 8 and 9 are anticipated. Applicants respectfully traverse this rejection and submit that Morimoto indeed does not teach calculating a time shift occurring in a video information signal of an output waveform.

Morimoto teaches a pulse signal delay device providing a fixed gate delay time in a digital integrated circuit (such as a CMOS circuit) independently of changes in a power supply voltage or environmental temperature. The device includes a series connection of delay units each having a minimum unit delay time and a circuit for continuously measuring the delay time of each delay unit, wherein a desired delay time is multiplied by the reciprocal of the delay time of each delay unit, and the number of stages of the delay units required for a predetermined delay

time is automatically selected on the basis of the multiplication result, thus achieving a stabilized delay time [Morimoto, Abstract]. Morimoto also teaches a phase-modulation signal generator generating a phase-modulation signal on the basis of the horizontal and the vertical sync signal [Morimoto, col. 9, lines 55-58].

In contrast to the teachings of Morimoto, the present invention includes calculating a time shift occurring in a video information signal of an output waveform. As described above, Morimoto does not teach calculating a time shift occurring in a video information signal of an output waveform.

The independent claim 1 is directed to a method of stabilizing chrominance subcarrier generation in a video signal including calculating a time shift occurring in a video information signal of an output waveform, converting the time shift into an equivalent phase shift and sending a phase correction number to a waveform generator block according to the equivalent phase shift. As described above, Morimoto does not teach calculating a time shift occurring in a video information signal of an output waveform. For at least these reasons, the independent claim 1 is allowable over the teachings of Morimoto.

Claims 2, 8 and 9 are dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over the teachings of Morimoto. Accordingly, claims 2, 8 and 9 are also allowable as being dependent upon an allowable base claim.

Claims 10, 11, 22, 45 and 46 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,557,335 to Oh (hereinafter Oh). In particular, it is asserted within the office action that claims 10, 11, 22, 45 and 46 are anticipated. Applicants respectfully traverse this rejection and submit that Oh indeed does not teach a digital loop filter having a K1 path and a K2 path.

Oh teaches a time base corrector for video signal in which a phase-locked loop is formed for a chroma carrier of a video signal so that a difficulty in detecting a phase error from a horizontal sync signal at an accuracy similar to the chroma carrier, in the vertical sync section having no chroma carrier and complexity of hardware in which the phase difference between the horizontal sync and chroma carrier should be considered, are overcome by employing a high gain loop filter and a clearing operation [Oh, Abstract]. Oh also teaches a horizontal sync phase error detector for detecting the horizontal sync phase error of the digital video signal output from the A/D converter and outputting a control signal, and a chroma carrier phase error detector for detecting a phase error between the chroma carrier and the sampling clock of the digital video signal output from the A/D converter [Oh, col. 5, lines 10-13 and 19-22].

In contrast to the teachings of Oh, the present invention includes a digital loop filter having a K1 path and a K2 path wherein the K1 path outputs an integer portion of a CLOCKOUT signal and the K2 path outputs a fractional portion of the CLOCKOUT signal. As described above, Oh does not teach a K1 path outputting an integer portion of a CLOCKOUT signal and a K2 path outputting a fractional portion of the CLOCKOUT signal.

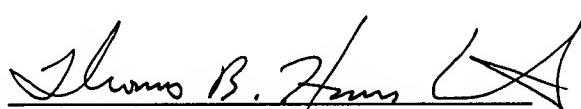
The independent claim 10 is directed to an apparatus for stabilizing chrominance subcarrier generation in a video signal including a clock generator circuit, a digital phase detector, a digital loop filter wherein the digital loop filter includes a K1 path and a K2 path, a waveform generator and a phase correction block, wherein the K1 path outputs an integer portion of a CLOCKOUT signal and the K2 path outputs a fractional portion of the CLOCKOUT signal. As described above, Oh does not teach the K1 path outputs an integer portion of a CLOCKOUT signal and the K2 path outputs a fractional portion of the CLOCKOUT signal. For at least these reasons, the independent claim 10 is allowable over the teachings of Oh.

Claims 11, 45 and 46 are dependent upon the independent claim 10. As discussed above, the independent claim 10 is allowable over the teachings of Oh. Accordingly, claims 11, 45 and 46 are also allowable as being dependent upon an allowable base claim. Claim 22 has been canceled.

For the reasons given above, Applicant respectfully submits that the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
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